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07/21/03
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Claims 1-46 (canceled)

Claim 47 (new)

47. A substantially planar substrate which is part of a biological assay system comprising:

several discrete hydrophilic regions on at least one planar surface, each of the hydrophilic regions being surrounded by a hydrophobic region, wherein the hydrophilic regions are designed to accommodate a chip or an array of particles, or an array of particles deposited on a chip, and wherein a biological reagent is bound to the particles.

Claim 48 (new)

48. The substrate of claim 47 wherein chips are accommodated in the hydrophilic regions and at least one surface of each chip is substantially hydrophilic.

Claim 49 (new)

49. The substrate of claim 47 wherein the hydrophilic regions are within the perimeter of indentations in the planar surface of the substrate, said indentations being surrounded by the hydrophobic regions.

Claim 50 (new)

50. The substrate of claim 47 wherein different types of particles have different biological reagents bound thereto.

Claim 51 (new)

51. A substantially planar substrate substantially comprising silicon or doped silicon which is part of a biological assay system, comprising:
several discrete hydrophilic regions formed by chemically altering specific regions of the planar surface, wherein each of said regions is surrounded by a hydrophobic region, and wherein the hydrophilic regions are designed to accommodate a chip or an array of particles, or an array of particles deposited on a chip, and wherein a biological reagent is bound to the particles.

Claim 52 (new)

52. The substrate of claim 51 wherein chips are accommodated in the hydrophilic regions and at least one surface of each chip is substantially hydrophilic.

Claim 53 (new)

53. The substrate of claim 51 wherein the hydrophilic regions are within the perimeter of indentations in the planar surface of the substrate, said indentations being surrounded by the hydrophobic regions.

Claim 54 (new)

54. The substrate of claim 51 wherein different types of particles have different biological reagents bound thereto.